

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999		
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0207161F Tactical Aim Missile				PROJECT 4132		
COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
4132 AIM-9 Product Improvement	51,199	52,604	41,007	17,399	2,639	4,890	16,610	5,898	0	240,212
Quantity of RDT&E Articles	0	5	17	1	0	0	0	0	0	23

Note: The RDT&E articles are deliverables under the Engineering and Manufacturing Development contract and are not separately priced. Quantities are delivered in the indicated Fiscal Years.

(U) **A. Mission Description**

The AIM-9X (Sidewinder) short range air-to-air missile modification program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile. Air superiority in the short range air-to-air missile arena is essential and includes first shot, first kill opportunity against an enemy employing IR countermeasures. Improvements in missile seeker and kinematics allow retrofit of components to current missiles to the maximum extent possible. Anti-Tamper features will be incorporated to protect improvements inherent in this design. Retrofitting of components will extend the operational effectiveness of existing inventories at an affordable cost while continuing evolution of the AIM-9 series. AIM-9X is an Acquisition Category ID (ACAT ID) joint-service program with Navy lead.

(U) FY 1998 (\$ in Thousands):

- (U) \$35,080 Continued manufacturing development, conducted Design Review II (DR II) and flew captive test units, started delivery of safe separation vehicles for Development Test IIB (DT-IIB) (Safe Separations)
- (U) \$5,144 Continued providing aircraft interface information to Engineering and Manufacturing Development (EMD) contractor to include any available wind tunnel tests for the F-15 and F-18
- (U) \$3,535 Continued preparations for and initiated DT-IIB
- (U) \$7,440 Provided for consulting services, technical engineering, and management support
- (U) \$51,199 Total

(U) FY 1999 (\$ in Thousands):

- (U) \$31,505 Continue the manufacturing development contract and accept delivery of 5 test articles
- (U) \$6,602 Continue providing aircraft interface to the EMD contractor, incorporate results of wind tunnel test for the F-15 and F-18
- (U) \$9,154 Continue DT-IIB, and start DT-IIC (Guided Launches), Operational Test IIA (OT-IIA) (Guided Launches), and conduct insensitive munitions tests
- (U) \$3,744 Provide for consulting services, technical engineering, and management support
- (U) \$1,599 Identified as source for SBIR
- (U) \$52,604 Total

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(U) FY 2000 (\$ in Thousands):

- (U) \$19,635 Continue the manufacturing development contract to include Technical Readiness Review (TRR) , Performance Readiness Review (PRR) leading to an Low Rate Initial Production (LRIP) award in 2nd Qtr FY00 and accept delivery of 17 test articles
- (U) \$1,300 Continue providing aircraft interface to the Engineering and Manufacturing Development (EMD) contractor in support of Operational Test-IIA (OT-IIA) and DT-IIID (Launches); complete Development Test-IIC (DT-IIC)
- (U) \$14,343 Continue providing government flight test support through implementation of OT-IIA and DT-IIID
- (U) \$5,729 Provide for consulting services, technical engineering, and management support
- (U) \$41,007 Total

(U) FY 2001 (\$ in Thousands):

- (U) \$8,946 Continue the manufacturing development contract and accepted delivery of 1 articles
- (U) \$1,181 Continue providing aircraft interface to the EMD contractor
- (U) \$4,831 Continue providing government flight test support through implementation of DT-IIID and OT-IIB (Launches)
- (U) \$2,441 Provide for consulting services, technical engineering, and management support
- (U) \$17,399 Total

(U) **B. Budget Activity Justification:**
This program is in budget activity 7 - Operational System Development, since the AIM-9X is a long-term evolution to the AIM-9M, a fielded system.

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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0207161F Tactical Aim Missile				PROJECT 4132					
(U) C. <u>Program Change Summary (\$ in Thousands)</u>										
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>					
(U) Previous President's Budget/FY 1999 PB	51,199	52,966	40,807	16,993	212,884					
(U) Appropriated Value	53,171	52,966								
(U) Adjustments to Appropriated Value										
a. Congressional/ General Reductions	-1,972	-362								
b. SBIR										
c. Omnibus or Other Above Threshold Reprogram										
d. Below Threshold Reprogramming										
(U) Adjustments to Budget Years Since FY 1999 PB			200	406						
(U) Current Budget Submit/FY 2000 PB	51,199	52,604	41,007	17,399	240,212					
(U) Significant Program Changes:										
FY99: \$1,599 identified as a source for SBIR										
(U) D. <u>Other Program Funding Summary (\$ in Thousands)</u>										
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Compl</u>	<u>Total Cost</u>
(U) Missile Procurement, P-1 line item Tactical	0	0	31,103	29,941	61,441	65,449	83,658	66,065	925,852	1,263,709
AIM Missile Modification										
(U) SEEK EAGLE	0	0	0	2,944	5,384	1,966	0	4,330	Cont.	Cont.

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(U) E. Acquisition Strategy:

After a full and open competition a Cost Plus Incentive Fee/Award Fee contract was awarded to HMSC to complete missile system development and prepare for production. This EMD contract includes three Fixed-Price Incentive Fee options for the first three production Lots. The production options are planned for exercise in FY00, FY01 and FY02. The EMD contract and production options provide strong incentives for the contractor to control costs, achieve reliability performance and deliver to schedule. The Low Rate Initial Production (LRIP) decision will be made by an OSD DAB.

The Full Rate Production (FRP) decision will be made by the Navy Acquisition Executive with advice from the Air Force Acquisition Executive subsequent to the successful completion of the associated exit criteria in Section 9.3. A FRP Service Decision Review will be held to approve award of the third production option and release the RFP for Lots 4 through 7. FRP Lots 4 through 7 contracts will be Firm Fixed-Price (FFP) with incentives provided if the contractor meets or beats his Procurement Price Commitment Curve (PPCC), a quantity price curve provided by HMSC with the EMD proposal. Rewards or penalties are provided depending on HMSC's (now Raytheon) performance relative to the PPCC. A Service review of Raytheon's Lot 4 through 7 proposals relative to the PPCC will be held prior to award of those contracts.

(U) F. Schedule Profile

	<u>FY 1998</u>				<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(U) Acquisition Milestones																
LRIP DAB												X				
(U) Engineering Milestones																
DR II		*														
TRR for TECHEVAL											X					
PRR for LRIP											X					
(U) Test and Evaluation Milestones																
Wind Tunnel Tests for F-15 & F-18		*														
DT-IIB (Safe Separation) Start				*												
DT-IIC (Guided Launches)							X									
Conduct Insensitive Munitions Tests						X										
OT-IIA (Guided Launches)								X								
DT-IIID (Launches)									X							
OT-IIB (Launches)														X		
(U) Contract Milestones																
LRIP Award												X				

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE February 1999		
BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0207161F Tactical Aim Missile					PROJECT 4132		
(U) A. <u>Project Cost Breakdown (\$ in Thousands)</u>												
					FY 1998	FY 1999	FY 2000	FY 2001				
(U) Project Cost Categories												
a. Primary Hardware Development					35,080	31,505	19,635	8,946				
b. Government Engineering Support					2,476	831	2,070	602				
c. Contractor Engineering Support					5,144	6,602	1,300	1,181				
d. Program Management (PMA)					4,760	2,721	3,496	1,742				
e. Development Test and Evaluation					3,535	9,154	14,343	4,831				
f. Travel					204	192	163	97				
g. Identified as source for SBIR					0	1,599	0	0				
(U) Total					51,199	52,604	41,007	17,399				
(U) B. <u>Budget Acquisition History and Planning Information (\$ in Thousands)</u>												
Performing Organizations:												
Contractor or Government	Contract Method/Type	Award or Obligation	Date	Performing Activity	Project Office	Total Prior to	Budget	Budget	Budget	Budget	Budget to	Total
Performing Activity	or Funding Vehicle	Obligation		EAC	EAC	FY 1998	FY 1998	FY 1999	FY 2000	FY 2001	Complete	Program
Identified as source for SBIR							1,599					1,599
<u>Product Development Organizations</u>												
Hughes	C/CPIF	Dec 94		5,694	5,694	5,694	0	0	0	0	0	5,694
Raytheon	C/CPIF	Dec 94		5,695	5,695	5,695	0	0	0	0	0	5,695
Raytheon	C/CPIF	Dec 96		129,227	129,227	17,270	35,080	31,505	19,635	8,946	16,791	129,227
Boeing	C/CPIF	Jan 96		20,397	20,397	4,361	5,144	6,602	1,300	1,181	1,809	20,397
Engineering Services	Various			N/A	N/A	11,082	2,476	831	2,070	602	4,736	21,797
Program Management*	PO			N/A	N/A	1,398	4,384	2,359	2,937	1,616	1,728	14,422
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Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	Budget FY 1998	Budget FY 1999	Budget FY 2000	Budget FY 2001	Budget to Complete	Total Program
<u>Support and Management Organizations</u>											
Various Contracts	FFP		N/A	N/A	693	580	554	722	223	135	2,907
<u>Test and Evaluation Organizations</u> (Included in product development)											
Field Activities	PO	Oct 96	N/A	N/A	1,733	3,535	9,154	14,343	4,831	4,838	38,474
Government Furnished Property: Not Applicable											
Identified as source for SBIR					0	0	1,599	0	0	0	1,599
Subtotal Product Development					45,500	47,084	41,297	25,942	12,345	25,064	197,232
Subtotal Support and Management					693	580	554	722	223	135	2,907
Subtotal Test and Evaluation					1,773	3,535	9,154	14,343	4,831	4,838	38,474
Total Project					47,966	51,199	52,604	41,007	17,399	30,037	240,212
* Note: Navy PMA personnel are capital funded											

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